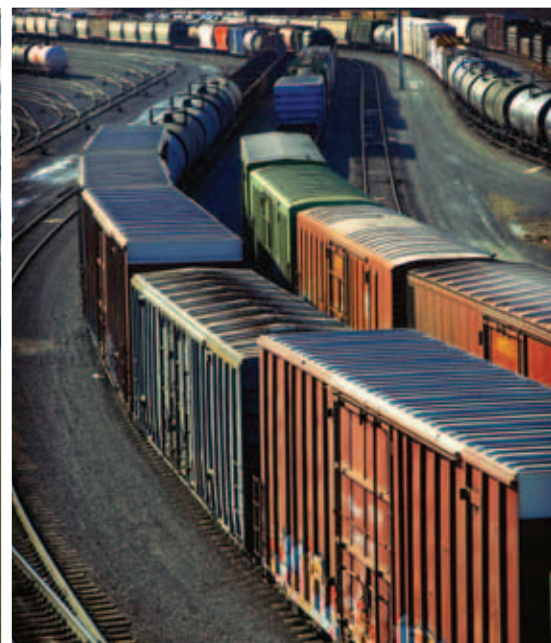


Transportation Reboot:

Restarting America's Most Essential Operating System

The Case for Capacity: To Unlock Gridlock, Generate Jobs, Deliver Freight, and Connect Communities



Unlocking Freight

<http://ExpandingCapacity.transportation.org>

PART **2** OF A SERIES

Acknowledgements

Much of the freight-specific information and analysis contained in this report was drawn from the forthcoming AASHTO *Freight Transportation Bottom Line* reports. These reports were commissioned by the AASHTO Special Committee on Intermodal Transportation and Economic Expansion, the Standing Committees on Rail and Water Transportation and the Subcommittee on Highway Transport, and prepared by Cambridge Systematics, Inc. The principal investigator for these reports is Lance Grenzeback for whom we offer special thanks for his assistance in updating information and forecasts for this report.

Other material cited in this report, including the estimates of capacity increases required, is drawn from research published in May 2007 by the Transportation Research Board's National Cooperative Highway Research Program (NCHRP). The report, *Future Options for the Interstate and Defense Highway System*, can be accessed at http://onlinepubs.trb.org/onlinepubs/trbnet/acl/NCHRP_20-24_52Task10_NCHRPFinal.pdf

The objective of the research project was to develop a potential vision for the future of the U.S. Interstate Highway System. The report was prepared by a study team led by David Gehr and Steve Lockwood of PB Consult, Gary Maring of Cambridge Systematics, Inc., Kevin E. Heanue and Alan E. Pisarski.

The analysis period considered in the Future Options Report was the 30 years from 2005 to 2035. In order for this report to be comparable to that of the National Surface Transportation Policy and Revenue Study Commission's report, *Transportation for Tomorrow*, AASHTO based its findings on the research conducted by PB, Cambridge Systematics, Pisarski and Heanue, but presented its recommendations using the 2050 time horizon. We have also updated the travel demand forecasts using more recent data from AASHTO's 2009 Bottom Line Report. The report also benefitted from the work Michael Gallis and Associates contributed to AASHTO's 2007 publication, *A New Vision for the 21st Century*.

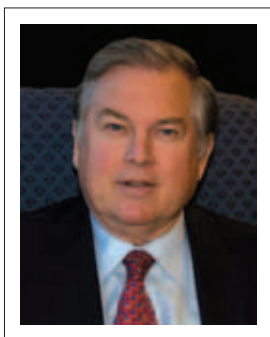
**Find Your State Examples of Freight Capacity Needs at
<http://ExpandingCapacity.transportation.org>**

Whether it's a traffic-choked interchange or a truck-only lane needed to accommodate increasing amounts of freight movement, states have a long and urgent list of capacity improvement projects. In response to an AASHTO survey, state departments of transportation have identified some of their high priority needs. Full details on these projects are available at <http://ExpandingCapacity.transportation.org>.

Foreword

AASHTO Executive Director

John Horsley



John Horsley
Executive Director

Consensus is growing among Congressional leadership—especially House Transportation and Infrastructure Committee Chairman James Oberstar and Senate Environment and Public Works Committee Chairwoman Barbara Boxer—that “freight” should be a priority in the next Surface Transportation authorization. Two reasons for this new emphasis stand out: the growing recognition that an efficient freight system is important to a strong economy and jobs here at home, and that a vibrant and integrated freight system is a basic ingredient in keeping America competitive abroad.

Based on AASHTO’s analysis contained in this report, it is clear that the U.S. freight system is not keeping up with the demands being made on it. The collapse of the economy in late 2008 temporarily reduced the volumes of freight moving through our seaports, and reduced related truck and rail freight activity. The time it takes for the economy to recover will give the freight system a breather before capacity deficiencies again constrain U.S. economic growth and productivity. During the interim, we must move aggressively to determine the system improvements needed and use this information to develop a strategic national freight plan that will take us there.

We have prepared this report to describe how important an efficient freight system is to the economy, the congestion already taking place, the growth in anticipated demand, and the challenge of keeping America competitive in the world economy.

The country has a lot at stake. It is critically important for our national leaders to address the challenges ahead and to fund the freight system capacity we need.

“The next time you are on a highway or city street, look around you. Notice the number of trucks, semis, and other cargo vehicles. Now imagine in 20 years: For every two trucks you see on the road today, there will be an additional one right behind it, carrying the expected growth in food deliveries, goods, and manufacturing equipment. If we don’t add more capacity, those additional trucks will be right next to you on the roadway, adding to congestion and delays. Is that a future you want to experience?”

—John Horsley, AASHTO
Executive Director

Unlocking Freight

Key Findings



The transportation system that supports the movement of freight across America is facing a crisis. Our highways, railroads, ports, waterways, and airports require investment well beyond current levels to maintain—much less improve—their performance. Millions of jobs and our nation's long-term economic health are at risk.

The need to move significantly more freight across the country and the world will increase substantially in the 21st century.

- The U.S. population reached 308 million in 2010, and is expected to reach 420 million by 2050. A larger population will consume more food, clothing, and other commodities.
- By 2020, the U.S. trucking industry will move three billion more tons of freight than we haul today. To meet this demand, the industry will put another 1.8 million trucks on the road.
- In 20 years, for every two trucks now on the road, there will be an additional one right behind it, carrying the expected growth in food deliveries, goods, and manufacturing equipment.
- In 40 years, overall freight demand will double, from 15 billion tons today to 30 billion tons by 2050. Freight carried by trucks will increase 41 percent; by rail 38 percent from today's quantities. The number of trucks on the road compared to today will also double.

Freight Movement—From the Wheat Field to the Breakfast Table



- By 2015, the widening of the Panama Canal may shift significant volumes of goods from West Coast ports to Gulf ports and ports on the Atlantic Coast. These ports may not be deep enough for larger vessels or may not have adequate road or rail capacity to meet the new international trade demands.
- U.S. exports will grow at a rate of 5.8 percent annually, outpacing imports which are expected to increase annually by 4.2 percent.



The current capacity of our nation's roads, rails, and seaports is not keeping pace with demand.

- Between 1980 and 2006, traffic on the Interstate Highway System increased by 150 percent, while Interstate capacity increased by only 15 percent.
- On average, 10,500 trucks a day travel some segments of the Interstate Highway System. By 2035, this will increase to 22,700 trucks for these portions of the Interstate, with the most heavily used segments seeing upwards of 50,000 trucks a day.

- The amount of traffic experiencing congested conditions at peak hours in the nation's most urban areas on the Interstate System doubled from 32 percent to over 67 percent.
- Nineteen states see the heaviest use; 88 percent of all these truck miles are centered around just six states—California, Arkansas, Georgia, Tennessee, Texas and Pennsylvania.
- Major highway bottlenecks at urban Interstate interchanges cause tens of thousands of hours of delay each day, week, and year for truckers, business travelers, and commuters. Strings of bottlenecks are emerging along regional and transcontinental freight routes, creating corridors of congestion instead of corridors of commerce.
- Estimates of the truck hours of delay for the worst freight-truck bottlenecks show that each of the top 10 highway interchange bottlenecks cause over a million truck-hours of delay per year, costing \$19 billion overall.
- More than half of the 240 locks funded by the US Army Corps of Engineers are more than 50 years old and have exceeded their economic design lives.

The nation's freight transportation system directly affects economic development, current and future jobs, and the quality of life in our communities.

- More than 10 million people work in jobs in the freight transportation industry, from couriers, truckers, laborers, shippers, railroad conductors and mechanics to postal carriers, warehouse operators and stock clerks.
- Delays and idling trucks at bottlenecks and chokepoints exacerbate negative air quality impacts on the surrounding communities.
- At-grade rail crossings in cities and towns disrupt daily commerce, create tie-ups and delays.

Greater investment, better planning and more highway and rail capacity are needed to address these problems.

■ **Expand the capacity of the Interstate Highway System.**

- Add 32,000 lane-miles to the current Interstate system.¹
- Upgrade 14,000 lane-miles of the current National Highway System to Interstate standards.
- Add 14,000 lane-miles to NAFTA corridors.
- Add 8,000 lane-miles of truck-only toll facilities.
- Add 400 lane-miles to provide access to key port and intermodal facilities

■ **Create and fund a national freight program that could include multi-state freight corridor organizations at the state, regional, and multi-state level.**

- Develop a National Multimodal Strategic Freight Plan.
- Apportion approximately \$3 billion annually of a proposed \$375 billion highway program to the states for freight investment from the Highway Trust Fund, and add another \$7 billion annually through freight fees outside the Highway Trust Fund.

■ **Invest in Intermodal Connector Improvements.**

- Ensure funding eligibility for intermodal connectors—usually local roads in older industrial and residential neighborhoods used by truckers to travel between major highways and the nation's ports, rail terminals, and air cargo hubs.
- Support increased collaboration between states and railroads on public-private partnerships and federal investment tax credits to finance growing needs on the freight rail network.



- Use the existing surplus from the federal Harbor Maintenance Trust Fund for critical seaport dredging projects. Additionally, direct the Federal Inland Waterway Trust Fund to complete needed lock and dam construction and maintenance projects.

*Photos courtesy of the America's Road Team,
American Trucking Associations*

**State examples of freight capacity needs are at
<http://expandingcapacity.transportation.org>**

¹ One lane-mile is one mile of one lane of a roadway; a one-mile length of a four-lane highway equals four lane miles.

INTRODUCTION

Facing America's Freight Capacity Crisis

"A thriving economy is built on good transportation. Some seem to think that the nation is now built for all time and that we can continue to prosper without expanding our transportation system. They are wrong. The simple fact is: No transportation, No economy. They are inseparable. We must invest to maintain and strengthen the American "Transconomy."

*—AASHTO President Larry (Butch) Brown,
Executive Director, Mississippi Department of Transportation*

America faces a freight transportation capacity crisis. Our highways, railroads, ports, waterways, and airports require investment well beyond current levels to maintain—much less improve—their performance. All systems are aging and stretched to capacity. The collapse of the economy in late 2008 temporarily reduced demand at seaports, and reduced truck and rail freight volumes. The time it takes for the economy to recover will give highway, rail, and port systems a breather before the capacity of the freight system will again constrain U.S. economic growth. During this period, decision makers will need to find a way to fund the improvements needed to improve the national freight system.

Transportation and the Economy

Transportation is vital to the U.S. economy. A \$1.2 trillion industry, it generates eight percent of the nation's jobs and accounts for nine percent of the U.S. economy. More importantly, it provides the equipment and services that support all other industries, especially manufacturing, retail, services, agriculture, and natural resources, which together account for 84 percent of the U.S. economy.

The performance of the nation's freight transportation system directly affects:

- **Economic Development and Jobs**—Reliable freight transportation gives businesses a competitive advantage in the global economy by providing them with the ability to deliver products at lower cost while reaching larger markets. More than 10 million people work in jobs in the freight transportation industry, from couriers, truckers, laborers, shippers, railroad conductors and mechanics to postal carriers, warehouse operators and stock clerks.

"The nation's 116 million households, 7.7 million business establishments, and 89,500 government units are part of an enormous economy that demands the efficient movement of freight. While the U.S. economy has been affected by the recent global recession, it is expected to fully recover and continue to grow."

*—Federal Highway
Administration 2009*